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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,981	08/22/2003	Andrew Harker	30020778US02	3035

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EXAMINER

DOAN, JENNIFER

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/646,981

Applicant(s)

HARKER, ANDREW

Examiner

Jennifer Doan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6 and 8-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicant's communication filed on February 28, 2005 has been carefully studied by the Examiner. The arguments advanced therein, considered together with the amendment made to the claims, are not persuasive. In view of further search, however, a relevant document is found; therefore, a new rejection is set forth below. This action is **not** made final.

#### ***Specification***

1. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4-6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naoki (JP 2001-326419) in view of Ukechi et al. (U.S. Patent 6,647,184).

With respect to claim 1, Naoki (figures 2a and 2b) discloses an optoelectronic assembly comprising an optical emitter (21) for emitting light along a main path, at least one mouldable (see figure 2a), substantially rigid optical light guide (46) having a first end for receiving a small proportion of the light from the main optical path ([0027], lines 1-2) and a second end, and at least one photodetector (41) located adjacent the second end of the optical light guide (46) for receiving light there from ([0026], line 2).

Naoki does not explicitly disclose the optical emitter is mounted on a first substrate and the at least one photodetector is mounted on a second substrate.

However, Ukechi et al. (figure 2) disclose the optical emitter (33) is mounted on a first substrate (31A) and the at least one photodetector (34) is mounted on a second substrate (31B). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device structure of Naoki with the first and second substrates for the optical emitter and photodetector mounted on (accordance with the teaching of Ukechi et al.). Doing so would be beneficial to obtain an optical assembly with high accuracy in coupling and reducing optical coupling loss.

With respect to claim 2, Naoki (figures 2a and 2b) discloses an optoelectronic assembly wherein the optical emitter (21), the at least one photodetector (41) and at least one optical light guide (46) are mounted on a substrate (24) and the at least one photodetector (41) is arranged at a periphery of the substrate (24).

With respect to claim 4, Naoki (figures 2a and 2b) discloses an optoelectronic assembly including a plurality of mouldable (see figure 2a), substantially rigid optical light guides (46, 47 and 48), and a plurality of photodetectors (41, 42 and 43), the plurality of optical light guides (46, 47 and 48) each having a second end located adjacent a respective one of the photodetectors (41, 42 and 43).

With respect to claim 5, Naoki (figure 2a) discloses an optoelectronic assembly wherein the plurality of photodetectors (41, 42 and 43) is mounted as an array (see figure 2a) adjacent a periphery of a substrate (24).

With respect to claim 6, Naoki (figure 2b) discloses an optoelectronic assembly wherein the plurality of optical light guides (46, 47 and 48) is manufactured as a single assembly for mounting to the substrate (24).

With respect to claim 10, Naoki (figures 2a and 2b) discloses an optoelectronic assembly wherein the optical waveguide (46) includes one or more fiducials to facilitate alignment of the waveguide (46) to the substrate (24).

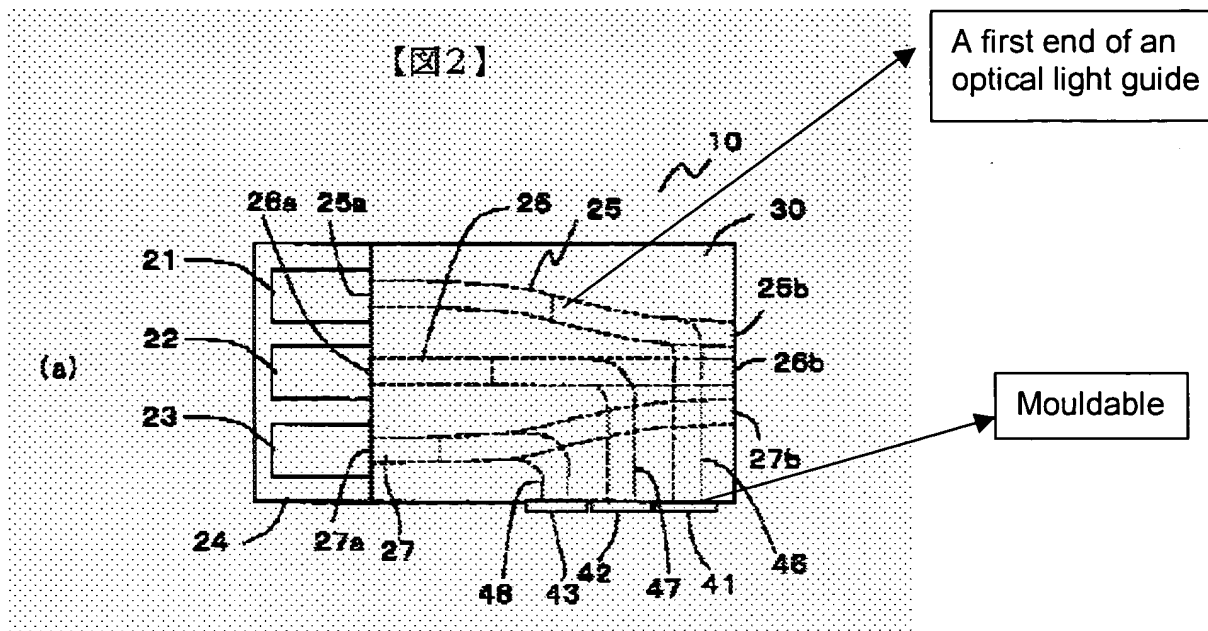


Figure 2a of Naoki

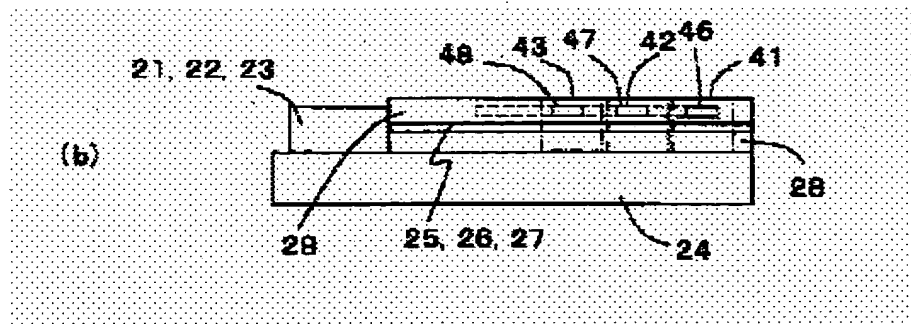


Figure 2b of Naoki

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4. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naoki and Ukechi et al. (as cited above), as applied to claim 1 above, and further in view of Jiang et al. (U.S. Patent 5,774,486).

With respect to claim 8, the combination of Naoki and Ukechi et al. substantially disclose the invention as claimed. Naoki (figures 2a and 2b) discloses an optoelectronic assembly, wherein the first end of the optical light guide (46) is positioned in the secondary light path.

Neither Naoki nor Ukechi et al. disclose means for splitting a small proportion of light from the main optical path into a secondary light path.

However, Jiang et al. (figure 4) disclose means for splitting a small proportion of light from the main optical path into a secondary light path (abstract, lines 2-4). Such an element would easily control and monitor the light emission. It would advantageously provide a power monitoring system having automatic control the emissions (column 1, lines 46-62). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device structure of the above combination by forming means for splitting a small proportion of light from the main optical path into a secondary light path (accordance with the teaching of Jiang et al.) for the purpose of easily controlling and monitoring the light emission and providing a power monitoring system having automatic control the emissions.

With respect to claim 9, the combination of Naoki and Ukechi et al. substantially disclose the invention as claimed.

Neither Naoki nor Ukechi et al. explicitly disclose the optical light guide is made from a stable, low absorption plastic material.

However, Jiang et al. disclose the optical light guide being made from plastic material (column 4, lines 19-20). The plastic material is inexpensive. It would advantageously provide an easy manufacture of power monitor system and automatic power control (column 1, lines 49-51). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device structure of the above combination by forming the optical light guide made from a plastic material (accordance with the teaching of Jiang et al.) for the purpose of facilitating the manufacture of the optical device with low cost and high efficiency.

***Allowable Subject Matter***

5. Claim 7 is allowed.

The prior art of record fails to disclose or reasonably suggest the combination of the structure of the optoelectronic assembly comprising the optical light guide includes at least one structural feature to facilitate interception of the light from the main optical path, in combination with the other limitations of the claim.



***Response to Arguments***

6. Applicant's arguments filed February 28, 2005 have been fully considered but they are not persuasive because of the following reasons:

The Examiner agrees with the applicant that Naoki does not explicitly teach two different substrates where the optical emitter and photodetector are mounted on; therefore, claim 1 was amended to include the above features. However, the amended claim 1 would not be allowed because these limitations would be obvious in the art. In fact, a newly cited reference that is found, in view of further search, teaching these features. Thus, a new rejection is applied.

7. Applicants' arguments with respect to claims 1-2 and 4-10 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00am to 3:30pm, second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer Doan

Patent Examiner

May 11, 2005